



# Stratospheric Update

An Update on Ozone Protection Progress



Implementation



International



Science & Research



Education



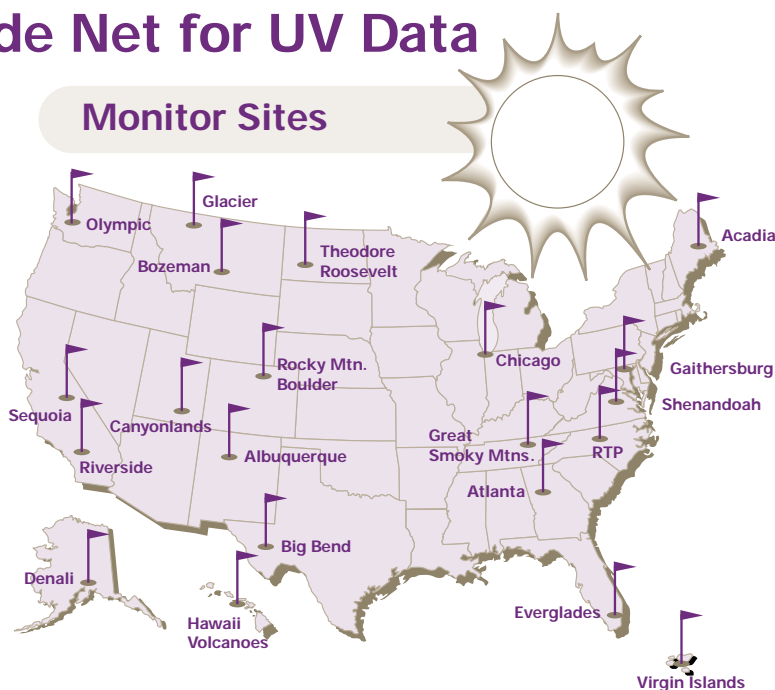
Resources

## Casting a Wide Net for UV Data

**T**he U.S. Environmental Protection Agency's (EPA's) Ultraviolet (UV)

Monitoring Project was in full swing this summer. The program, operated in conjunction with other federal agencies through the U.S. Global Change Research Program, measures the amount of UV radiation reaching the earth's surface on a daily basis. Data collected from program sites throughout the country provide specific information on the UV radiation geographic distribution and trends in the United States over time. Scientists and researchers studying the effects of UV radiation on both living beings and inanimate objects can use the program's long-term records.

### Monitor Sites



Solar UV measurements are calculated by an automated instrument called a Brewer spectrophotometer. Although the measurements are detailed, they can be related to the UV Index, which

(CONTINUED ON PAGE 3)

## Making the Grade in the Shade: SunWise Pilot Under Way

**T**his May, on the verge of another sun-drenched summer, many students took an important new lesson home from their classrooms. Kids in 25 elementary schools across the country learned about ozone depletion and sun safety through their participation in a pilot of EPA's SunWise School Program. The pilot, which will continue during the 1999 to 2000 school year, invites

schools to try out draft educational materials and techniques before SunWise is launched nationally in 2000.

Through SunWise, a comprehensive environmental and health education program, children and their caregivers participate in

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# A+





## Implementation

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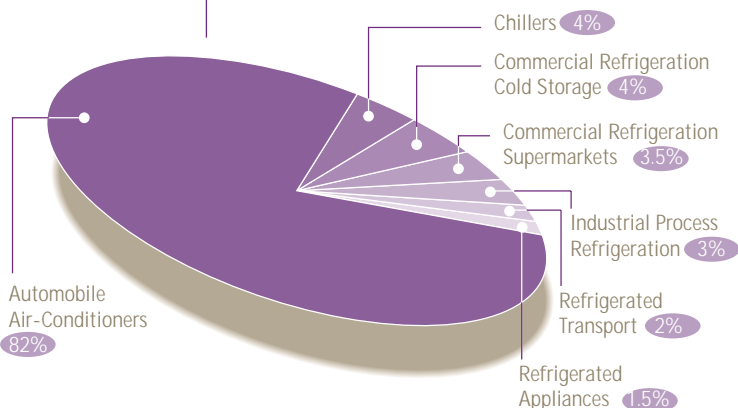
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# Report on the Supply and Demand of CFC-12

**E**PA recently released an update of the U.S. national supply of and demand for chlorofluorocarbon (CFC)-12 refrigerant (also known as R-12 or by the brand name Freon). EPA estimates the total of CFC-12 at the beginning of 1999 to be between 24 and 48 million pounds. This inventory marks a decline from the 1998 inventory of 40 to 75 million pounds. The report also estimates 1999 demand for CFC-12 at 23 million pounds, a drop of 4 million pounds from last year's demand. According to EPA's report, both supply and demand of CFC-12 are expected to continue to decline between 1999 and 2005, and supplies of CFC-12 may disappear as early as next year. Demand is expected to fall to 15 million pounds by 2001 and to 3 million pounds by 2005.

Motor vehicle air-conditioning accounts for 82 percent of the annual demand for CFC-12. Automakers such as Ford, General Motors, and Chrysler hold the largest stockpiles of CFC-12 currently in distribution. These supplies are used to service cars and trucks using CFC-12 that might still be under warranty. Refrigerant packagers and reclaimers, and wholesalers in the stationary air-conditioning and commercial refrigeration sectors, also hold large quantities.

### Demand for CFC-12 by Sector



### CFC-12 Supply and Demand

The supply of CFC-12 depends largely upon how much is available in stockpiles around the nation and how much is recycled or reclaimed from existing equipment. Demand for CFC-12 depends upon the number of air-conditioning and refrigeration systems that require refrigerant to replace CFC-12 lost through leakage and during servicing. Supplies for certain uses of CFC-12, such as Department of Defense critical uses and propellants for metered-dose inhalers used by asthma patients, are not included in the estimates.

Other highlights of EPA's report include:

- Spot shortages of CFC-12 for 1999 are highly unlikely, although perceived shortages might occur due to distribution problems.
- Reclamation efforts for CFC-12 have become more efficient, but the levels of reclamation are not increasing as rapidly as expected. This is likely due to many of CFC-12 users recovering and recycling the refrigerant for reuse rather than sending it out to reclaimers.
- CFC-12 chillers are being converted and replaced at slower rates than originally anticipated. This could create an increase in demand for CFC-12 and a strong market for reclamation.
- Crackdowns on illegal imports of CFC-12 have been highly successful. (See "Enforcement Activities Intensify," p. 6).

To obtain a copy of the report, you can access it online at [www.epa.gov/ozone/geninfo/sdreport99.html](http://www.epa.gov/ozone/geninfo/sdreport99.html) or call EPA's Stratospheric Ozone Information Hotline at 800 296-1996.

## UV Data

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provides a daily forecast of the intensity of the sun's radiation for 58 communities across the United States.

The Brewer spectrophotometer also infers the amount of protective ozone in a column of air stretching from the earth's surface through the upper atmosphere. Depletion of the ozone layer would result, for example, in increased UV levels at the surface of the earth.

There are 21 Brewer spectrophotometer sites throughout the United States. Seven are located in urban areas, while the remaining 14 are operated in national parks in cooperation with the Park Research and Intensive Monitoring of Ecosystems Network. Daily measurements from these sites are reported and placed on UV Net, the project's Web site.

"The information is great for scientists and researchers," says EPA's Dr. Gary Collins, data manager for the project. "We've had great feedback from the professional community, including NASA and the National Oceanic and Atmospheric Administration. They've been very impressed with the Web site," Collins reported.

Monitoring data is accessible from the program's Internet site in graph, report, or electronic file format at <[www.epa.gov/uvnet](http://www.epa.gov/uvnet)>. For more information about the UV Monitoring Project, call Dr. Jack Shreffler at 919 541-2194 or Dr. Gary Collins at 513 569-7174.

## Monitor Sites

Brewer spectrophotometers are located in seven U.S. cities including:

Albuquerque, New Mexico  
Atlanta, Georgia  
Boulder, Colorado  
Chicago, Illinois  
Gaithersburg (National Institute of Standards and Technology), Maryland  
Research Triangle Park (RTP), North Carolina  
Riverside, California

The National Park (NP) sites include:

Acadia NP, Maine  
Big Bend NP, Texas  
Canyonlands NP, Utah  
Denali NP, Alaska  
Everglades NP, Florida  
Glacier NP, Montana  
Great Smoky Mountains NP, Tennessee  
Hawaii Volcanoes NP, Hawaii  
Olympic NP, Washington  
Rocky Mountain NP, Colorado  
Sequoia NP, California  
Shenandoah NP, Virginia  
Theodore Roosevelt NP, North Dakota  
Virgin Islands NP, Virgin Islands

## Science & Research



## SunWise Pilot

(CONTINUED FROM PAGE 1)

classroom, school, and community projects that teach them about the health risks of overexposure to the sun, as well as the science behind ultraviolet (UV) radiation and ozone depletion. SunWise schools can choose to participate in a wide range of activities such as monitoring the daily weather forecast and UV Index on the SunWise Web site, measuring UV radiation, participating in cross-curricular classroom science and health activities, enhancing school sun-safety policies and practices, and sponsoring guest speakers and partnerships.

Though largely preventable, skin cancer has grown to become the most common form of cancer in America, with more than one million cases diagnosed each year. Overexposure to UV radiation also contributes to premature aging of the skin, cataracts, and other health effects. Since most of the typical American's lifetime sun exposure happens before the age of 18, children's attitudes and behavior about sun safety are particularly important. In developing the SunWise Program, EPA has worked with dozens of national and local organizations, teachers, health professionals, and parents.

SunWise is one of several EPA Environmental Monitoring for Public Access and Community Tracking (EMPACT) Projects. Visit <[www.epa.gov/sunwise](http://www.epa.gov/sunwise)> for more information or contact Maura Cantor, SunWise Program Director, at 202 564-9096. Also, see the Resources section beginning on page 11.

## Education



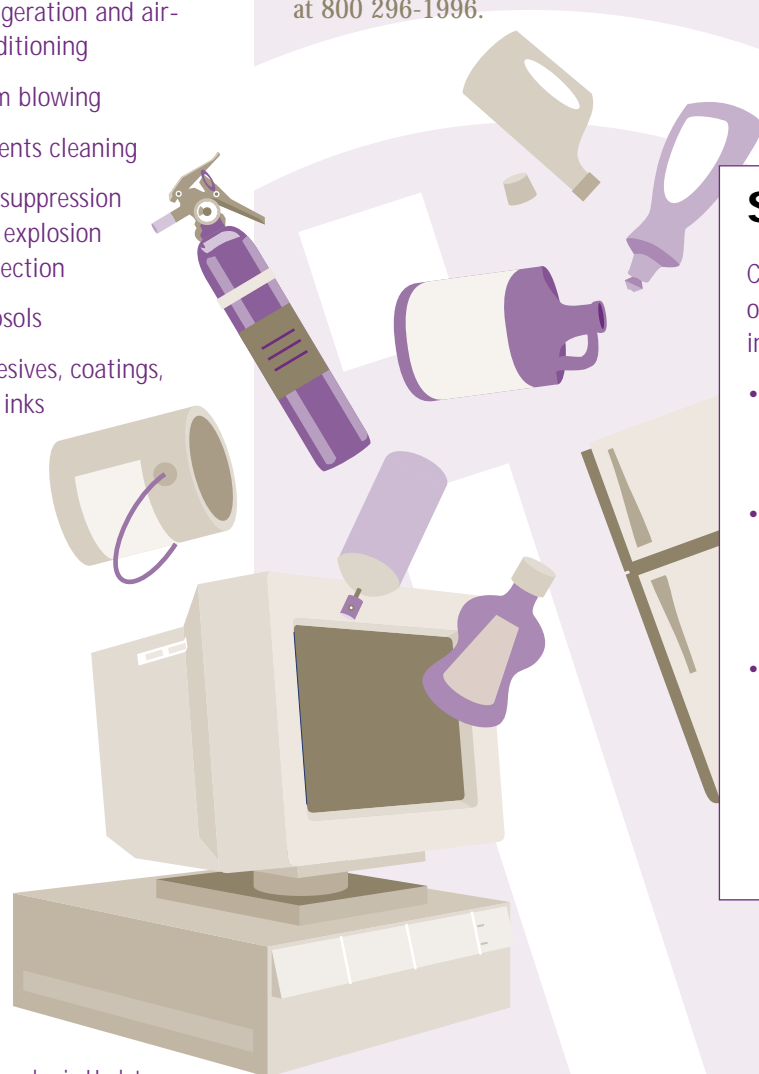


## Implementation

## Types of Products Under Review

EPA continues to review new submissions for SNAP listings across a variety of industrial sectors including:

- refrigeration and air-conditioning
- foam blowing
- solvents cleaning
- fire suppression and explosion protection
- aerosols
- adhesives, coatings, and inks



## SNAP Update

EPA's Significant New Alternatives Policy (SNAP) program evaluates alternatives to ozone-depleting substances (ODSs) and determines their acceptability for use. Since the last update in 1998, the SNAP program has published several new decisions regarding ODS alternatives. Among the most noteworthy of the new decisions are:

- Chlorobromomethane is an unacceptable alternative in the solvents cleaning; adhesives, coatings, and inks; fire suppression; and aerosols sectors.
- HFC-4310mee is an acceptable alternative in the solvents cleaning and aerosols sectors.
- HFC-236fa is an acceptable alternative (with restrictions) in the fire suppression sector.

EPA published an Advance Notice of Proposed Rulemaking (ANPRM) for the compound n-propyl bromide (nPB) on February 18, 1999 (64 FR 8043). The ANPRM identified the significant uncertainties surrounding policy decisions on nPB, specifically the ozone-depletion potential and human toxicological risks, and gave the public an opportunity to send additional data. EPA received a wide range of comments on nPB. The Agency is currently in the process of reviewing them and hopes to issue proposed rulemaking in 2000.

For more information about the SNAP program, contact Kelly Davis of EPA at <davis.kelly@epa.gov> or 202 564-2303, or the Stratospheric Ozone Information Hotline at 800 296-1996.

## SNAP on the Web

Check out the SNAP Web site at <[www.epa.gov/ozone/title6/snap/](http://www.epa.gov/ozone/title6/snap/)> for the latest news. For specific information go to the following sites:

- <[www.epa.gov/ozone/title6/snap/lists](http://www.epa.gov/ozone/title6/snap/lists)>. This portion of the SNAP Web site has all of the latest determinations on the comprehensive list of alternatives.
- <[www.epa.gov/ozone/title6/snap/snap.html](http://www.epa.gov/ozone/title6/snap/snap.html)>. Check out EPA's updated SNAP fact sheets, including revised questions and answers on the fire suppression and solvents cleaning sectors.
- <[www.epa.gov/ozone/title6/snap/app.html](http://www.epa.gov/ozone/title6/snap/app.html)>. For the SNAP program to review alternative chemicals, technologies, or manufacturing processes, a SNAP Information Notice Application must be submitted. The SNAP application is now available online at this location in WordPerfect or PDF formats.



# Labeling for Health: FDA Finalizes Sunscreen Product Regulations

Consumers planning to rub out the chance of sun-related skin damage by rubbing on lotions and balms will soon have new information to consider before choosing their outdoor protection.

In May 1999, the Food and Drug Administration (FDA) finalized new labeling requirements for over-the-counter (OTC) sunscreen products. They simplify and streamline sunscreen labels by restricting the language of product claims, controlling active ingredients, and categorizing protection levels.

The most notable change in label lingo is the use of FDA's three new sun protection categories, developed to clarify sun protection factor (SPF) levels for consumers. Optional protection rankings will include:

- Minimal —SPF levels from 2 to under 12.
- Moderate —SPF levels from 12 to under 30.
- High—SPF levels of 30 and higher.

The SPF number also will be required on sunscreen labels.

Other requirements under the new regulations direct manufacturers of OTC sunscreens, including cosmetic products carrying sun protection claims, to discontinue the use of unsupported or misleading terms such as “sunblock” and “water-proof” on product labels. Label-conscious consumers might also notice an FDA-approved “sun alert” statement, discussing the important role of sunscreen in overall sun-related health protection. Seeking to reduce consumer misunderstanding concerning all sun-related products, the new FDA regulations target tanning products as well. Labels on these lotions, which do not contain sunscreen ingredients, must feature a warning about their lack of protection against sun exposure.

FDA encourages all manufacturers to comply with the new labeling standards as soon as possible, but demands compliance within two years for sunscreen

## Simplified Labeling?

As powerful influences on consumer behavior, product labels relating to health issues usually meet with intense scrutiny. FDA's new sunscreen regulations are no exception and are already attracting criticism. While FDA contends that its SPF categories are intended to eliminate consumer confusion, some organizations have expressed concern about their impact.

According to Joyce Weisbach Ayoub, with the Skin Cancer Foundation, “We contend that SPF's of at least 15 are necessary for adequate protection against the sun's harmful UV rays. Thus, the entire SPF range in FDA's “minimal” category and part of the SPF range in the “moderate” category would be inadequate for effective protection.”

In addition, Ayoub worries that the “high” category, by referring to “SPF 30 and up,” puts a cap on high-level skin care protection and doesn't provide for the important extra protection provided by SPF's as high as 45 or 50.

In response, FDA reminds concerned parties that use of the new SPF categories is optional and the regulations still require the display of the product's specific SPF number. In addition, an FDA spokesperson disagrees with arguments about the “capping” of SPF levels, explaining: “The increased percentage of protection offered by sunscreens with an SPF over 30 is so small, it's quite difficult to measure. Since there's no way of scientifically proving the claims of additional protection provided by SPF's higher than 30, our new categories use 30 as their high-level marker.”

products, and within one year for tanning products. Product claims concerning ultraviolet A (UV-A) protection will continue as previously required until further notice from FDA.

For more information on the new sunscreen regulations, consult FDA's Web site at <[www.fda.gov](http://www.fda.gov)>.



# Spotlight on Used CFC

## Enforcement Activities Intensify

**I**llegal imports of previously used ODSs are being curtailed thanks to the success of enforcement activities. Working closely with U.S. Customs, the Department of Justice, and other relevant agencies, EPA has been making efforts to minimize illegal imports of ODSs and to ensure those who do import illegally are caught and convicted. Arrests are up and the volume of illegal substances is down. As recent smuggling cases show, individuals and their companies can expect severe sentences for illegally importing or trying to import CFCs.

*“CFC smugglers get caught, convicted, fined, and put in federal prison. The message should be clear to anyone thinking of breaking the law—don’t try it.”*

—Steve Herman

EPA’s Assistant Administrator for  
Enforcement and Compliance Assurance

## Recent Enforcement

A Texas man was arrested for smuggling more than 75,000 pounds of R-12 (or Freon) from Venezuela. The charges indicate his intention to sell the material, which carries a street value of \$600,000, in the United States. Customs officials say this was one of the largest Freon smuggling rings encountered, and the U.S. Attorney called it one of the largest seizures of Freon ever in the state of Texas.

Since the 1996 phaseout of ODSs began, approximately two million pounds of illegally imported CFCs and other ODSs have been seized and impounded and more than 90 individuals and businesses have been charged with smuggling.

## ODS Import Regulations

In 1990, Title VI of the Clean Air Act authorized EPA to restrict the use, import, and disposal of ODSs. Since that time, EPA has implemented policies and taken action to curtail the illegal import of ODSs into the United States. EPA bans the import of ODSs most destructive to the ozone layer, such as CFCs and halons. Certain exemptions exist, however, for chemicals that have been used and removed from operating equipment. Allowing the import of these used substances helps optimize the use of existing supplies, discourages the production of virgin material, discourages venting of the substance to the atmosphere, and prevents shortages in sectors that still rely on these substances. EPA set up a petition process so the Agency could independently verify that substances a person wishes to import have, in fact, been previously used. Companies that want to import used ODSs submit petitions to EPA detailing the country of origin and the facility where the substance was originally used.

# Imports

## Enforcement Actions

Two men were sentenced in California for smuggling R-12 from Mexico. The men smuggled R-12 into the United States and negotiated the purchase of the supply with an undercover U.S. EPA Criminal Investigation Division agent. They were fined \$50,000 and forfeited \$85,000 in cash to the U.S. Customs Service. One man was sentenced to 6 months community confinement and placed on 3 years supervised release, and the other was sentenced to 2 years probation and 200 hours of community service.

A woman was sentenced for a scheme designed to defraud a U.S. businessman into purchasing 10,000 pounds of recycled Halon 1301 not approved for import by EPA. The woman received 4 months of home detention, 3 years probation, and a \$1,000 fine. This case represents the first prosecution in the United States related to the importation of Halon 1301.

Smuggling of CFCs is not anticipated to increase in the next few years, but is likely to continue due to the potential for significant financial gain. Legal importers of CFCs pay an excise tax of \$7.15 per pound of material, and this amount increases by \$0.45 per year. Illegal

importers avoid this excise tax and can sell CFCs below market price while making a profit. EPA's success in catching and prosecuting smugglers is expected to continue to increase due to greater awareness by the industry and efforts from the enforcement agencies.

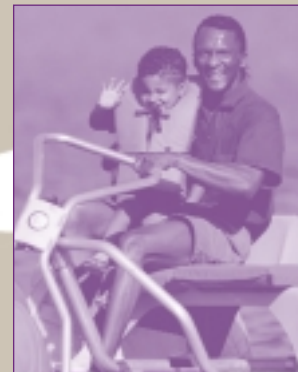
For more information about EPA's enforcement activities, Title VI regulations, and EPA's petition process, or if you suspect someone is attempting to illegally import ODSs, contact Brian Ng of EPA at 202 564-9295 or [<ng.brian@epa.gov>](mailto:ng.brian@epa.gov). You also can call the Stratospheric Ozone Information Hotline at 800 296-1996 or visit the Web site at [<www.epa.gov/ozone>](http://www.epa.gov/ozone).

## 1998 ODS Petition Requests Decline

**T**he number of petitions submitted to EPA to import previously used ODSs has fallen for the first time since the 1996 phaseout of ODSs. In 1998, EPA approved 161 petitions to import ODSs, which is less than the 182 petitions received in 1997, but still substantially more than the 73 petitions received in 1996. So far in 1999, EPA has received 52 petitions to import ODSs. Under the 1998 petitions 1,312,739 kilograms of CFCs and other ODSs were legally imported into the United States. In 1999, the petitions so far have brought 919,696 kilograms of used ODSs into the country.

Under the Montreal Protocol, developing countries can still produce virgin ODSs until January 1, 2010. For companies and individuals in the United States, however, it is illegal to import any of the newly produced or virgin ODSs from these or any other country.

# Breathe Easy—MDIs Are Going CFC-Free



Millions of people who suffer from asthma or chronic pulmonary conditions rely on metered-dose inhalers (MDIs) to live healthy, comfortable lives. In the past, all MDIs used CFCs as propellants to deliver medicine into the patient's lungs. Recently, however, the first CFC-free MDI was introduced in the United States, and more are expected to be added to the marketplace beginning in 2000. In fact, all major pharmaceutical companies are currently working to reformulate their MDIs to be CFC-free.

In 1996, MDIs were designated as an "essential use" under the Montreal Protocol, which means they are exempt from the production and import bans of CFCs and other ODSs stipulated under the Protocol. At that time, CFC-free MDIs were not available, and the Parties to the Protocol recognized their importance in treating serious respiratory diseases; however, they did not intend for them to be permanently exempted and expected substitutes for the ODSs used in exempted products to be developed. Pharmaceutical companies worldwide, therefore, have been trying to find alternative substances for MDI propellants.

The Food and Drug Administration (FDA) is responsible for writing regulations to establish

the framework for a safe and orderly transition to CFC-free MDIs. In March 1997, the FDA issued an Advanced Notice of Proposed Rule-making outlining the criteria or guidelines FDA will follow when considering if particular CFC MDIs should retain their status as an "essential use." FDA will be publishing a proposed rule-making later this year.

In the meantime, EPA is continuing outreach efforts to patients, parents of young patients, and health care professionals to ensure a successful transition to CFC-free MDIs. EPA recognizes the importance of educating patients about the reliability and performance of the new MDIs, dispelling rumors, and minimizing anxieties about the transition. EPA, in cooperation with the FDA, the National Institutes of Health, industry, and several patient health care organizations, has already developed a brochure entitled *Your Metered Dose Inhaler Will Be Changing... Here Are the Facts*. Copies of the brochure are available by calling EPA's Stratospheric Ozone Information Hotline at 800 296-1996 or through EPA's Web site at [www.epa.gov/ozone](http://www.epa.gov/ozone).

For more information contact Erin Birgfeld of EPA at 202 564-9079 or [birgfeld.erin@epa.gov](mailto:birgfeld.erin@epa.gov).



# EPA Presents 1999 Stratospheric Ozone Protection and Climate Protection Awards



International

In 1999, EPA will present its annual Stratospheric Ozone Protection and Climate Protection Awards to individuals, associations, and corporations that have demonstrated exceptional leadership, personal dedication, and technical achievements. Since 1990, over 398 Stratospheric Ozone Protection Awards have been presented. Winners have come from 29 countries including Australia, Belgium, Brazil, Canada, Chile, China, Dominican Republic, France, Germany, Hungary, India, Ireland, Japan, Kenya, Malaysia, Malta, Mexico, The Netherlands, Norway, Poland, Singapore, Spain, Sweden, Switzerland, Taiwan, Thailand, United Kingdom, United States, and Venezuela. EPA established the Climate Protection Awards last year and presented them to 18 winners from 7 countries including Australia, Brazil, China, Sweden, United Kingdom, United States, and one award to a global partnership.

This year, EPA is presenting its Stratospheric Ozone Protection Award to 14 individuals and organizations. Climate Protection Awards will be presented to 10 individuals and organizations. Both awards will be presented at the upcoming Earth Technologies Forum in Washington, DC, September 27 through 29, 1999.

## 1999 Stratospheric Ozone Protection Award Winners

Per M. Bakken  
David Clare  
Sheila Jones  
Ingrid Kökeritz  
Robert T. Wickham  
Theresia Indrawanti Pudiyanto  
Jacinthe Séguin  
James Shevlin  
Liu Yi  
The Cannon Group  
Canadian Forces Fire Marshal, Department of National Defence  
Idaho Army National Guard, Combined Support Maintenance Shop  
Project Management Office for Bradley Fighting Vehicle Systems  
Wei T'o Associates and the National Library of Canada

## 1999 Climate Protection Award Winners

Dr. Rosina M. Bierbaum  
Dr. Mack McFarland  
Eugene L. Smithart, P.E.  
Applied Materials  
Motorola  
Annapolis Detachment of the Carderock Division, Naval Surface Warfare Center  
Nissan  
The Polyisocyanurate Insulation Manufacturers Association  
STMicroelectronics  
Texas Industries, Inc.



## Implementation

# Regulatory/Policy Update



## Regulatory Movement on Methyl Bromide

Last year, Congress mandated that EPA conform its methyl bromide phaseout schedule, quarantine and preshipment, and relevant critical use exemptions to those laid out in the Montreal Protocol. Specifically, this includes a phaseout date of January 1, 2005, instead of the 2001 date in the current regulation, and phasedowns from the 1991 baseline of 25 percent in 1999, 50 percent in 2001, and 70 percent in 2003. EPA promulgated the first 25 percent phasedown on February 25 of this year. According to the Protocol, “quarantine” and “preshipment” uses of methyl bromide are to be exempt from the baseline. EPA is currently developing a regulation to allow for these exemptions. A second rule in progress is intended to lay out the remaining phasedown and phaseout schedule as well as a structure that could allow for critical uses in the future. For more information, contact Tom Land at 202 564-9185.

## HCFC Allowance Allocations on the Horizon

Following an April 5, 1999, Advanced Notice of Proposed Rulemaking on a hydrochlorofluorocarbon (HCFC) allowance allocation system, EPA is in the process of responding to comments in a rule expected to be published in late fall. As a Party to the Montreal Protocol, the United States operates under an annual production and import limitation. As we move toward the first step in the HCFC phaseout in January 2003, EPA realizes the need to allocate allowances, facilitate a smooth transition to substitutes, and ensure compliance with the Montreal Protocol. An integral step toward developing an allocation system is to determine a representative baseline. EPA is currently reviewing historical data in an attempt to be as equitable as possible while ensuring compliance with the cap. For more information, contact Vera Au at 202 564-2216.

## Changes Being Made to the Class I Nonessential Products Ban

EPA is drafting a final rule, based on comments received in response to the proposal of June 14, 1999, to modify the class I nonessential products ban. The proposed rule discussed removing current exemptions from the class I ban on certain aerosols because adequate substitutes for those products are now commercially available. It also proposed to add refrigerators containing class I refrigerants to the ban, since substitutes are commonly used in manufacturing refrigerators in the United States and most other countries. EPA expects to issue the final rule in the spring of 2000. EPA will begin drafting proposed modifications to the class II ban sometime next year. For more information, contact Cindy Newberg at 202 564-9729.

## Laboratory Essential Use Exemptions to End

Under the Clean Air Act, the more stringent provisions of either the Montreal Protocol or the Clean Air Act prevail. While essential use exemptions have been granted by the Montreal Protocol and allowed under the Act for laboratory uses, the Protocol does not permit continuation of such an exemption beginning in 2000. Therefore, EPA can no longer grant these exemptions for U.S. laboratories as of January 1, 2000. For more information, contact Erin Birgfeld at 202 564-9079.

## Grandfathering for Refrigerant Technicians Expired

In a recent letter to technician certification organizations under its Section 608 refrigerant recycling program, EPA has clarified that grandfathering technicians who participate in voluntary certification programs is no longer a legal option. The grandfathering provision was in place until May 15, 1995, to allow technicians who voluntarily became certified before EPA's approval program was implemented to retain that certification, as appropriate. After that, grandfathering of programs or technicians was no longer permitted. For more information, contact Julius Banks at 202 564-9870.

# UNEP Holds International Ozone Event

**"S**ave our sky—be ozone-friendly." This was the message the United Nations Environment Programme (UNEP) promoted during its International Day for the Preservation of the Ozone Layer, held on September 16, 1999. The goal of this annual event was to raise awareness of the issue of ozone depletion and of the importance of preserving the ozone layer.

"The protection of the ozone layer concerns all of us—consumer, worker, investor, farmer, neighbor, student. Small things, actions like

checking and fixing the leaks of air-conditioners or refrigerators, contribute to saving our sky," said Nelson Sabogal of UNEP's Ozone Secretariat. UNEP worked with governments around the globe on outreach efforts such as broadcasting radio and television programs and encouraging nongovernmental organizations to participate in this event.

For more information on UNEP's ozone protection awareness activities, including educational materials and posters, access the UNEP Web site at [www.unep.org/ozone](http://www.unep.org/ozone) or link through EPA's Web site at [www.epa.gov/ozone](http://www.epa.gov/ozone).



## International

## A Closer Look at OPTICS

A new tool is helping people share information about technologies related to ODSs. The Ozone Protection Technologies Information Clearinghouse System (OPTICS) is a Web database with information on current technologies related to ODSs. Developed by the Global Environment and Technology Foundation under an EPA grant, OPTICS is a user-maintained program that allows developers of ODS technologies not only to search, but also add and update, valuable information about innovative methods to destroy, recycle, reclaim, or identify specific ODSs.

Currently, managers of the OPTICS database are asking for assistance in collecting more information. In addition to ODS recycling, identification, and destruction, users may enter summaries and full descriptions of their technologies; multiple search criteria; development and licensing status; technology needs, limitations, and costs; and technology developer contact information.

To access, add, or update information, visit the OPTICS Web site at [www.techknow.org](http://www.techknow.org).

## SunWise Behavior Brochure

How can you protect yourself and your loved ones from harmful UV radiation? Find out in *The Sun, UV, and You: A Guide to SunWise Behavior*

(EPA 430-K-99-035). This newly updated booklet presents the science behind UV radiation and stratospheric ozone and the health risks associated with overexposure to the sun. It also provides steps for protecting yourself and your children, defines the UV Index, and tells where to get more information. Details about EPA's SunWise School Program also are included in the booklet.

For more information or to obtain a copy of the booklet, contact EPA's Stratospheric Ozone Information Hotline at 800 296-1996 or visit the Stratospheric Ozone Web site at [www.epa.gov/ozone](http://www.epa.gov/ozone).



## Resources

## Report on the Supply and Demand of CFC-12

EPA has released its annual report updating estimates of the supply of and demand for CFC-12 in the United States during the period 1999 to 2005. Among other findings, the report concludes that both the supply and demand of CFC-12 dropped in 1998. The report can be accessed online at [www.epa.gov/ozone/geninfo/](http://www.epa.gov/ozone/geninfo/) or can be requested through the Stratospheric Ozone Information Hotline at 800 296-1996.

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## Resources

(CONTINUED FROM PAGE 11)

### Enforcement and Compliance Assurance

EPA's Office of Enforcement and Compliance Assurance (OECA) has released its accomplishments report for fiscal year 1998. It summarizes the progress OECA is making toward realizing its continuing goal of establishing and maintaining a strong and fair enforcement program and providing assistance and incentives to enhance compliance. Highlighted in the report is the work that OECA has done with the Department of Justice in bringing criminal charges and assessing fines in 1998.

The document (EPA-200-R-99-003) can be obtained through the National Center for Environmental Publications and Information at 800 490-9198 and on the Internet at <[www.epa.gov/oeca](http://www.epa.gov/oeca)>.

## Web Site Watch

### SunWise School Program

[www.epa.gov/sunwise](http://www.epa.gov/sunwise)

Earlier this year, EPA introduced its new SunWise School Program Web site. In addition to sun-safety tips and general information on the dangers of overexposure to ultraviolet (UV) radiation, the Web site includes a draft of *On the Way to SunWise: A Program Guide for Schools*. This guide provides information about the SunWise School Program, details how to become a Partner school, describes tools available to Partner schools, and explains how the program will be evaluated. To make things easy, the Web site includes an online form with which

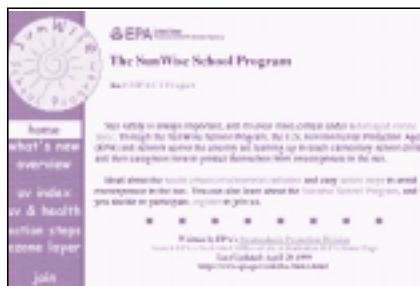
schools can register for the pilot program, to be held throughout the September 1999 to June 2000 school year.

Visitors to the site can also access the UV database, an activity that allows students to enter daily UV data, weather conditions, and information regarding daily sun protection practices.

### Kids Express What They've Learned

[www.epa.gov/ozone/art/drawings.html](http://www.epa.gov/ozone/art/drawings.html)

New on EPA's Ozone Web site is the Ozone Depletion Art Project. Currently the site includes original drawings and paintings from students from seven schools. All artwork relates to concepts about ozone depletion the students have learned in school.



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